

Serial No.: 10/015,049
Amdt. Dated: June 1, 2006
Reply to Office action of March 1, 2006

RD-29460-1

REMARKS

In the Office Action of March 1, 2006, claims 1-8, 10-29, 34-42, 45-47, 50-57, 59-78, 83-91 and 94-96 were rejected. In this response, the Applicants request reconsideration and allowance of claims 1-8, 10-29, 34-42, 45-47, 50-57, 59-78, 83-91, and 94-96.

In the previous response dated April 20, 2004, the Applicants amended the claims to recite compositions which do not contain an organic phosphorous-containing compound and in which the boron source is present in an amount corresponding to between about 0.2 and about 5 (or between about 0.2 and about 2 weight percent of the composition).

In the present Office Action, the Examiner has rejected all claims under 35 USC 102(b) as being anticipated by Watanabe U.S. Patent No. 5,266,618 (Watanabe). Alternatively, the Examiner has rejected all claims under 35 USC 103(a) as being unpatentable over Watanabe. The Applicants urge that especially as amended claims 1-8, 10-29, 34-42, 45-47, 50-57, 59-78, 83-91, and 94-96 recite patentable subject matter which is neither disclosed nor suggested by Watanabe.

35 U.S.C. § 102 (b) Rejections

In the Office Action of March 1, 2006 claims 1-8, 10-29, 34-42, 45-47, 50-57, 59-78, 83-91 and 94-96 were rejected under 35 USC 102(b) as being anticipated by Watanabe U.S. Patent No. 5,266,618 (Watanabe). The rejection of claims 1-8, 10-29, 34-42, 45-47, 50-57, 59-78, 83-91 and 94-96 is respectfully traversed. As a preliminary matter, the Applicants note that the Watanabe reference cited here (U.S. Patent No. 5,266,618) is equivalent to the Watanabe reference cited in the Office Action of January 21, 2004 (EP 520,186B1). Neither reference discloses each and every element of the invention as claimed and therefore a rejection under 35 U.S.C. 102(b) is improper.

Applicant's broadest claim, amended claim 1, recites a flame retardant resinous composition comprising:

- (1) at least one aromatic polycarbonate;

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(2) a least one silicone source; and

(3) at least one boron source wherein said boron source is present in an amount corresponding to between about 0.2 and about 5 weight percent of the entire composition,

wherein the flame retardant composition does not contain an organic phosphorous-containing flame retardant additive.

A fourth claim element present in claim 1 ((4) optionally at least one member selected from the group consisting of an antidrip agent, a second thermoplastic resin which is not a polycarbonate resin and a rubber modified graft copolymer) is optional and will be ignored for the purposes of this discussion. Each of the other of the Applicants' claims are limited to at least the same extent as claim 1.

The Watanabe reference discloses a flame retardant resin composition comprising:

- (1) a polycarbonate;
- (2) a phosphorous compound;
- (3) a boron compound; and
- (4) a polyorganosiloxane and/or a fluorine resin.

Watanabe further discloses that when each of elements (1)-(4) is present in the composition they may be present in the following amounts:

- (1) 100 parts by weight polycarbonate;
- (2) from 0.1 to 40 parts by weight phosphorous compound;
- (3) from 0.001 to 40 parts by weight boron compound; and
- (4) from 0.01 to 5 parts by weight polyorganosiloxane and or from 0.001 to 4 parts by weight fluorine compound.

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It should be stressed that the broad compositional ranges disclosed in Watanabe are applicable only when each of elements (1)-(4) is present in the composition. Thus, with the exception of the Comparative Examples shown in Table 1, Watanabe is silent with respect to the make-up of compositions not containing a phosphorous compound.

Watanabe discloses but a single composition comprising a polycarbonate, a silicone source, and a boron source; the composition of Comparative Example-9. However, the composition of Comparative Example-9 does not disclose the limitation that the boron source be present in an amount corresponding to between about 0.2 and about 5 weight percent of the entire composition. In Comparative Example-9, the boron compound, zinc boroate, is present in an amount corresponding to about 9 percent by weight of the entire composition ($10/(75+25+10+1) \times 100 = \sim 9$).

Because Watanabe does not disclose each and every limitation of the Applicants' claimed invention, the rejection of claims 1-8, 10-29, 34-42, 45-47, 50-57, 59-78, 83-91 and 94-96 may not properly be made under 35 USC 102(b). Thus, the Applicants courteously request that the rejection of 1-8, 10-29, 34-42, 45-47, 50-57, 59-78, 83-91 and 94-96 under 35 USC 102(b) as anticipated by Watanabe be withdrawn.

35 U.S.C. § 103 (a) Rejections

Claims 1-8, 10-29, 34-42, 45-47, 50-57, 59-78, 83-91 and 94-96 were rejected under 35 USC 103(a) as being unpatentable over Watanabe. The rejection is respectfully traversed.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the reference or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and

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not based on applicant's disclosure. In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP Section 2143 - Section 2143.03

The Applicants urge that a prima facie case of obviousness has not been established. With respect to the first requirement: that there be some suggestion or motivation, either in the reference or knowledge generally available to one of ordinary skill in the art, to modify the reference to arrive at the claimed invention; the Applicants note that Watanabe teaches flame retardant resin compositions requiring an organic phosphorous-containing flame retardant additive. (See for example Watanabe column 2, lines 31-40). Watanabe provides specific instructions on which organo-phosphorous compounds may be employed (See for example Watanabe column 5, lines 12-47). The Comparative Examples presented in Watanabe (See Table 1) teach that an organo-phosphorous compound is required to achieve a V₀ rating in the UL94 flammability test. Watanabe further characterizes the organo-phosphorous compound as an essential component (See column 2, lines 43-46):

"The flame-retardant resin composition of the present invention contains a phosphorous compound and a zinc borate as essential components, and by the combined use of these two components, an excellent flame retarding effect can be obtained"

The claims of the instant invention, as amended in a response dated April 20, 2004, do not include compositions comprising organic phosphorous-containing flame retardant additives. Rather than suggesting the compositions of the claimed invention, the Watanabe reference actually teaches away from the instant invention.

Moreover, there is no suggestion in Watanabe et al. that in compositions which are free of an organic phosphorous-containing flame retardant additive, the amount of boron source should be limited to an amount corresponding to between about 0.2 and about 5 percent by weight of the overall composition. As noted, Watanabe discloses a single relevant composition which is free of organic phosphorous-containing flame retardant additives (See Watanabe Comparative Example 9, Table 1). The composition of Comparative Example-9 contains zinc borate in an amount corresponding to about 9 percent by weight of the overall composition, roughly twice the amount of boron source recited in the Applicants' broadest claim, claim 1. Here again, with respect to limitations

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on the amount of boron source present in the compositions, Watanabe teaches away from the Applicants' claimed invention.

Again, it is stressed that the broad compositional ranges disclosed in Watanabe are relevant only when each of elements (1)-(4) is present in the composition. The numeric ranges provided in Watanabe, and in particular the range of from 0.001 to 40 parts by weight of a boron compound, are given in reference to Watanabe's four-component composition and cannot fairly be construed to cover any and all combinations of two or more of those four components. The Comparative Examples may be taken to disclose only the specific compositions disclosed and what that disclosure might fairly suggest to one skilled in the art. Given the relatively poor performance of the composition of Comparative Example-9 in the UL 94 test (Watanabe Table 1, rating = "B"), a greater, not a smaller amount of zinc borate would be required.

Thus, Watanabe neither discloses nor suggests the Applicants' claimed invention. Therefore, Applicants respectfully urge that the rejection of claims 1-8, 10-29, 34-42, 45-47, 50-57, 59-78, 83-91 and 94-96 under 35 U.S.C.103 (a) as being unpatentable over Watanabe be withdrawn.

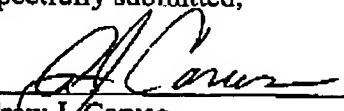
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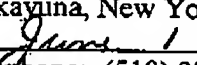
In view of the foregoing arguments, the Applicants believe that each of claims 1-8, 10-29, 34-42, 45-47, 50-57, 59-78, 83-91 and 94-96 is now in condition for allowance. The Applicants thus courteously solicit prompt notice of allowance for these claims.

Should the Examiner believe that anything further is needed to place the application in even better condition for allowance, the Examiner is requested to contact the Applicants' undersigned representative at the telephone number below.

Respectfully submitted,



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